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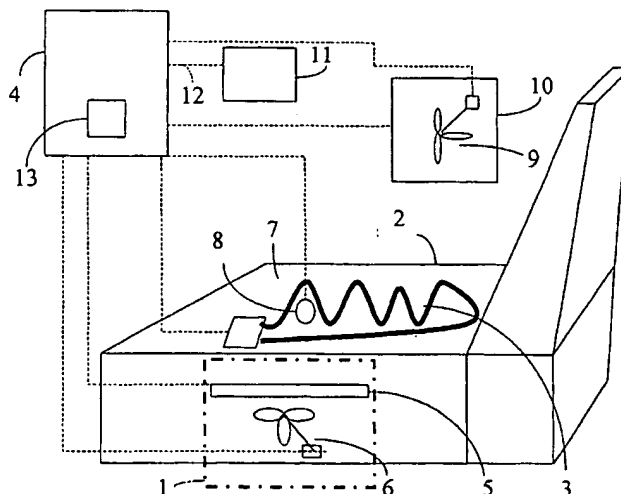
— with international search report

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[Continued on next page]

(54) Title: SEAT WITH TEMPERATURE CONTROL AND VENTILATION AND SAFETY SYSTEM FOR A VEHICLE



(57) Abstract: The invention relates to a device for temperature control and ventilation of a seat comprising a cooling device. The invention is characterized in that the seat comprises an electrical heater and a detector unit in connection to the electrical heater for detection of a temperature at said electrical heater, where the cooling device and the electrical heater are activated in dependence of at least the detected temperature. The invention also relates to a method for such a temperature control and ventilation. The invention also relates to a security system at a vehicle. By means of the invention, a better adjustment of temperature and ventilation of a seat is provided, with the possibility to eliminate humidity without chilling the user.

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(15) Information about Corrections:

see PCT Gazette No. 41/2003 of 9 October 2003, Section II

Previous Correction:

see PCT Gazette No. 20/2003 of 15 May 2003, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 01/01521

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G05D 23/19, B60K 28/06, B60N 2/56
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G05D, B60K, B60N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5921314 A (SCHULLER ET AL), 13 July 1999 (13.07.99), column 3, line 32 - column 6, line 63, figures 1-3	1-10,13-15
Y	--	11
Y	US 5934748 A (FAUST ET AL), 10 August 1999 (10.08.99), column 2, line 18 - line 20; column 3, line 64, figure 1, abstract	11
X	EP 0227610 A1 (IVECO FIAT S.P.A.), 1 July 1987 (01.07.87), column 1, line 40 - column 3, line 8, figures 1-2, claim 1, abstract	12,17

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

13 July 2001

Date of mailing of the international search report

16 -07- 2001

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Swedish Patent Office
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 01/01521

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0929055 A1 (RIPPBAUER, G), 14 July 1999 (14.07.99), column 2, line 27 - column 6, line 46, figures 1-7, abstract -- -----	12,17

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/SE 01/01521**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: **16**
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
PCT Article 6
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- I. Claims 1-11, 13-16
Seat with temperature control and ventilation
- II. Claims 12, 17
Safety system for vehicle

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT
Information on patent family members

02/07/01

International application No.
PCT/SE 01/01521

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
US	5921314	A	13/07/99	CA 2211943 A	22/08/96
				DE 59601826 D	00/00/00
				EP 0809576 A,B	03/12/97
				SE 0809576 T3	
				ES 2133942 T	16/09/99
				JP 3064016 B	12/07/00
				JP 10503733 T	07/04/98
				WO 9625301 A	22/08/96
US	5934748	A	10/08/99	DE 19703516 C	07/05/98
				FR 2759038 A,B	07/08/98
				GB 2321722 A,B	05/08/98
				GB 9801730 D	00/00/00
				IT 1298875 B	07/02/00
				IT RM980051 A	26/07/99
				JP 3108673 B	13/11/00
				JP 10215979 A	18/08/98
EP	0227610	A1	01/07/87	IT 1208838 B	10/07/89
				IT 8568033 D	00/00/00
EP	0929055	A1	14/07/99	AU 1431399 A	26/07/99
				WO 9935626 A	15/07/99